

Handler Proficiency (Nahkoda) Dnature Operationalize *Purse Saine Fishing Gear*

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ABSTRACT

This study aims to: (1) find out the skills of handlers in operating *purse seine* fishing gear (2) Knowing the *fishing ground* of *purse seine* fishing gear (3) Knowing the factors that affect fishing operations with *purse seine* fishing gear. The research methods used are survey methods, interviews and questionnaires. The data were analyzed descriptively. A total of 30 *purse seine* handlers at PPP Lampulo have been respondents in this study. The results showed that *the purse seine* ship handlers in Lampulo PPP are mostly 41-50 years old, the average handler education level is junior high school, the majority of handlers in Lampulo PPP have more than 5 years of experience, handlers at Lampulo PPP only have a Certificate of Proficiency (SKK) in operating ships. Generally, *purse seine* boat handlers at PPP Lampulo have satisfactory skills when viewed from how to determine fishing grounds, search for fish swarms, collect schools of fish and operating techniques for fishing gear.

Keywords : *Proficiency, Handler, and Purse Seine Fishing Gear.*

ABSTRAK

Penelitian ini bertujuan untuk : (1) mengetahui kecakapan pawang dalam mengoperasikan alat tangkap *purse seine* (2) Mengetahui *fishing ground* alat tangkap *purse seine* (3) Mengetahui faktor-faktor yang mempengaruhi operasi penangkapan ikan dengan alat tangkap *purse seine*. Metode penelitian yang digunakan adalah metode survey, wawancara dan kuesioner. Data dianalisis secara deskriptif. Sebanyak 30 orang pawang kapal *purse seine* di PPP Lampulo telah dijadikan responden dalam penelitian ini. Hasil penelitian menunjukkan bahwa pawang kapal *purse seine* di PPP Lampulo mayoritas berumur 41-50 tahun, tingkat pendidikan pawang rata-rata SMP, mayoritas pawang di PPP Lampulo memiliki pengalaman di atas 5 tahun, pawang di PPP Lampulo hanya memiliki Surat Keterangan Kecakapan (SKK) dalam mengoperasikan kapal. Umumnya pawang kapal *purse seine* di PPP Lampulo memiliki kecakapan yang memuaskan apabila ditinjau dari cara menentukan daerah penangkapan, mencari gerombolan ikan, mengumpulkan gerombolan ikan dan teknik pengoperasian alat tangkap.

Kata kunci: *Kecakapan, Pawang, dan Alat Tangkap Purse Seine.*

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INTRODUCTION

Aceh Province has a land area of 57,365.57 km² or 5,736,557 ha and has a coastline length of $\pm$ 1,660 km with a sea area of 295,370 km² consisting of territorial waters and archipelagic waters covering an area of 56,563 km² and an exclusive economic zone around Aceh waters covering an area of $\pm$ 238,807 km². The region consists of a cluster of large and small islands of $\pm$ 180 islands, among which there are 44 inhabited islands and 136 uninhabited islands. In addition, Aceh has 73 important rivers that flow to the estuary, making this province one of the areas that has great potential in the marine and fisheries sector. In accordance with the development direction of the Ministry of Maritime Affairs and Fisheries in 2007, it is focused on realizing the three pillars of *pro-poor*, *pro-job* and *pro-growth* development that need to be supported by the creation of a supportive business climate so as to encourage investment in the marine and fisheries sector (pro-business). One of the activities is Fisheries Revitalization, which focuses on the field of capture fisheries with three important economic commodities, namely cobs, skipjack.

Ayodhyoa (1976-1981) the purpose of catching purse seine fishing gear is small pelagic and large pelagic fish. The development of the three commodities is in accordance with the potential and characteristics of each region / development location. In the utilization and management of fishery resources in Aceh, various problems are still encountered in the field, including the low mastery of the technology used and the lack of skills of fishermen and fisheries entrepreneurs in managing catches. Along with the passage of time, knowledge and technology, especially in the field of fisheries, are also developing to

use effective and efficient fishing gear in order to get the desired catch in accordance with the purpose of catching.

RESEARCH METHODS

This research was conducted using a descriptive method, namely by conducting interviews and direct observations to the field to observe aspects that include within the scope of the study to describe precisely the handler's performance in operationalizing *purse seine* fishing gear. According to Supranto (2003), descriptive research can be exploratory which aims to allow researchers to describe the situation at a certain period of time as a basis for making decisions. Broadly speaking, data will be collected through interviews with ship handlers and direct observations in the field, these observations aim to get a real picture of the handler's proficiency in operationalizing *purse seine* fishing gear. The data and information that has been obtained will be presented for easy to understand and understand. The analysis method used for the preparation of the study is a descriptive analysis method, the SPSS version 19.0 application is used to explain the background data of respondents. Meanwhile, the results of the interviews and observations obtained in accordance with the actual conditions in the field, such as the handler's ability to operationalize *purse seine* fishing gear will be explained narratively.

RESULTS OF RESEARCH AND DISCUSSION

Description of Research Location

The fishing port of lampulo was originally the Technical Implementation Unit (UPT) of the Directorate General of Capture Fisheries, Ministry of Marine Affairs and Fisheries. In line with the spirit of

regional autonomy and the rolling wheels of Indonesia's reform, the Governor of Aceh province delivered his letter number: PEG-800/4588, dated December 1, 2000, proposing the transfer of assets of the Lampulo Fishing Port in Aceh province. Then the decree of the Minister of Maritime Affairs and Fisheries Number: KEP.18 / MEN / J / 2001, dated March 12, 2001, which was followed up by the Secretary General of the Ministry of Marine Affairs and Fisheries Number: B-475 / SJ-DKP / III / 2001, dated March 14, 2001, then switched the management of the UPT of the lampulo fishing port from the Directorate General of Capture Fisheries / KKP to the Aceh Provincial Government, and officially became the UPTD of the Lampulo Fishing Port under the Marine and Fisheries Service on April 12, 2003 accordingly with the decree of the Governor of Aceh Province Number: 06 of

2003 concerning the establishment of the UPTD of the Lampulo Fishing Port and the Governor's Decree No.27 of 2009 concerning the organizational structure.

Geographically, lampulo fishing port (PP Lampulo) is located in Lampulo Village, Kuta Alam district, Banda Aceh City which is at the coordinate point⁰⁵ 0°57'63" LU and 95°32'30". PP Lampulo is the largest fishing port in Aceh with an overall area of 62,000 ha. The limits of PP Lampulo are as follows:

- The north is directly adjacent to the Aceh Sea/Malacca Strait
- To the south it is directly adjacent to Gampong Mulia
- To the West It is directly adjacent to Krueng Aceh, and
- To the East it is directly adjacent to Gampong Syiah Kuala



Figure 1. Lampulo Fishing Port

Fleet of Fishing Vessels and Fishing Gear at PPP Lampulo

The results of observations in the field as well as skunder data from the

syahbandar of the Lampulo fishing port, it is known that the number of ship fleets at the Lampulo Fishing Port over the past 6 years can be seen in table 1 below:

Table 1. Number of Fishing Fleets at Lampulo Fishing Port

Year	Ship Size (GT) Unit						Total (Units)
	< 5 GT	6- 10 GT	11-20 GT	21-30 GT	31-50 GT	51-100 GT	
2010	54	82	46	53	40	10	285
2011	54	82	46	53	40	10	285
2012	22	91	40	79	76	16	324
2013	39	124	37	55	47	20	322
2014	36	125	36	55	61	29	342
2015	38	134	37	56	64	32	361

Based on table 1 above, it can be seen that the development of the number of fishing vessel fleets in PP lampulo from year to year continues to increase. The fleet of ships of size 6 - 10 GT is the most dominant fleet of increase in numbers around the last five years, then the fleet of ships of

sizes 31 - 50 GT and 51-100 GT has also increased over the past five years. The rest there is also an increase and decrease in the numbers about the last five years. The increase in the number of ship fleets at the Lampulo Fishing Port for the last 6 years, can be seen in the chart below:

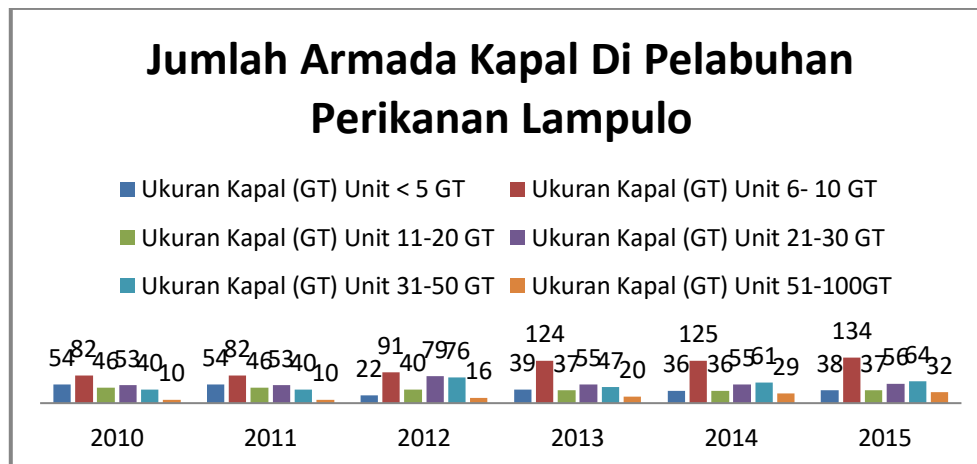


Figure 2. Graph of the Number of Capture Fleets in the Lampulo PPP

Description of *Purse seine* Boat Handler In Lampulo Fishing Port

The conditions of each *purse seine* ship handler involved in this study are as follows.

Age

The age of the handler as a respondent in this study can be seen in Figure 3 below:

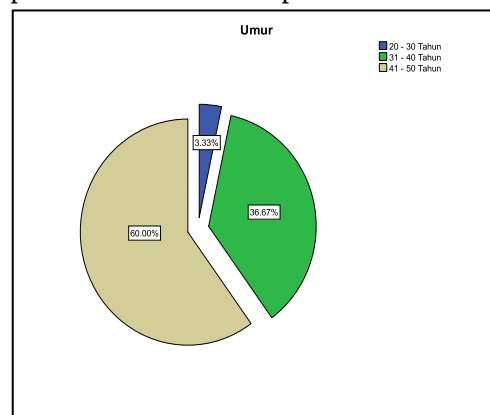


Figure 3. Handler Age Chart

Based on the graph, Figure 3 shows that most of the handlers in this study are

aged 41-50 years, namely as many as 18 people (60%), as many as 31 - 40 years old as many as 11 people (36.67%), and there are the youngest handlers among all handlers aged 20-30 years as many as 1 person (33.33%).

Education

The level of education of *purse seine* handlers at the Lampulo Fishing Port is presented in Figure 4 below:

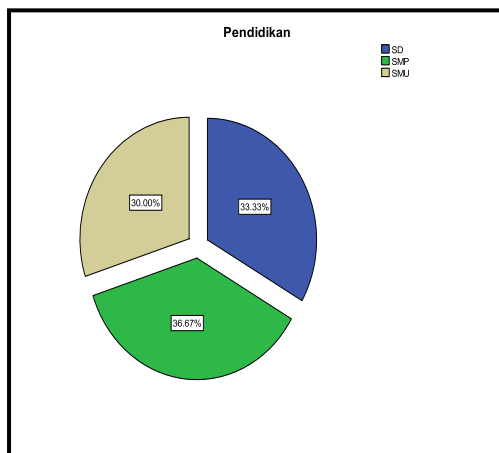


Figure 4. *Purse seine* Ship Handler Education Level Graph

Figure 4 shows that the majority of fishermen have the last educational background of junior high school, namely 11 people (36.67%), as many as 10 people (33.33%) elementary school graduates, and only 9 handlers (30.0%) with high school education backgrounds. The level of education of *purse seine* handlers is mostly low, this is due to several factors of the handler's own background, such as: the economic limitations of parents, the doctrine of parents to work, and so on.

The Experience of Being a Handler

The respondent's experience of being a *purse* ship handler is shown in Figure 5 below.

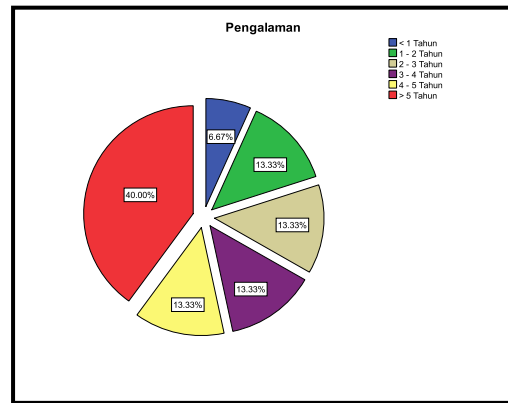


Figure 5. Experience Graph of Being a Handler

Based on the chart in Figure 5, it shows that the handlers who have the longest experience are as many as 12 people (40.0%) which is over 5 years old. handlers who have 1-2 years of experience are as many as 4 people (13.3%). Handlers who have 2-3 years of experience are 4 people (13.3%). Furthermore, as many as 4 handlers have 3-4 years of experience (13.3%). Furthermore, those who have 4-5 years of experience are also 4 people (13.3%) and only 2 people have experience under 1 year (6.7%).

Certificate of Expertise That Handlers Have

The certificate of expertise possessed by the *purse seine* ship handler at PP Lampulo is presented in Figure 6 below:

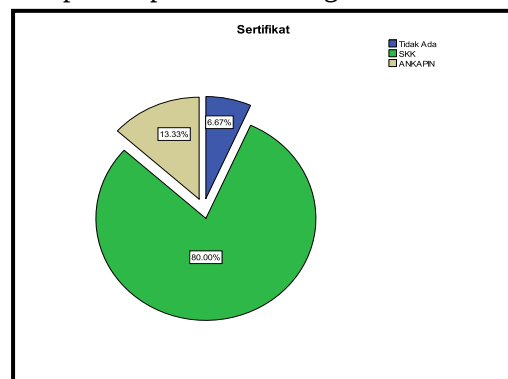


Figure 6. Graph of Certificate of Expertise That Handlers Have

According to the graph in Figure 6, it shows that the majority of handlers in PP lampulo, namely 24 people (80.0%) handlers pocket skk 60 miles in operating fishing vessels with *purse seine* fishing gear, and only 4 people (13.33%) of *purse seine* ship handlers have ANKAPIN certificates as competency / skill certificates, then there are 2 people (6.67%) handlers do not pocket any certificates in operating fishing vessels with tools catch *purse seine*.

Results of Observations on Handler Skills in Operating *Purse seine* Fishing Gear

The fishing gear found in PP Lampulo mostly uses *purse seine* fishing gear of various sizes with various operating methods such as using sponges, hayut wood, chasing fish hordes. Rumpon is a method of fishing using nets with the help of rumpon aids and lights, this method of fishing is generally carried out in the dark moon. Hayut wood is a method of catching with a net and utilizing hayut wood that is dragged by the current, usually in the wood there are many schools of fish surrounding the wood. Meanwhile, fishing by chasing fish swarms is a method of fishing using nets that look for schools of fish in the middle of the sea by paying attention to the characteristics of the water surface and other natural signs, such as seagulls, water scum, and water surface ripples, etc.

Based on the results of observations in the field and interviews with *purse seine* ship handlers at PPP lampulo there are several important things that they (handlers) always pay attention to before carrying out arrest operations, including:

1. Preparation

The supplies and equipment to be used during the capture operation have been carefully prepared at the port, so that at the time of the capture operation in the

sea can run smoothly. The preparations carried out include: fuel, lubricating oil, ice, foodstuffs, fresh water, and the preparation of fishing gear.

ability (potential and real) in knowing, understanding, analyzing, assessing and solving problems using ratios or thinking

In terms of the preparation of fishing gear, the handler has prepared the order of fishing gear before the ship leaves for the fishing ground with . The entire handler in PPP Lampulo has the ability to operate / circle the net in a clockwise direction, this is evident from the arrangement of fishing gear on the deck of the ship, according to the results of surveys in the field, the fishing gear on each *purse seine* ship in the Lampulo PPP is arranged on the hull on the right side, with the arrangement / arrangement of the net on the deck of the ship in the arrangement between the buoys of the net body and ballast (including rings) separated, for the top of the floated net is prepared to be lowered at the earliest then followed by the body of the net and subsequently the ballast along with the rings. The rings are arranged sequentially so that they are easily lowered and do not wrinkle. For more details on the order / arrangement of *purse seine* fishing gear at PPP Lampulo can be seen in the picture below.



Figure 7. Arrangement of *Purse seine* Fishing Gear on board

2. Tool drop (setting)

The result of interviews with several handlers at PP Lampulo, The fishing operation began with unloading fishing gear. According to the handler's experience, they always pay attention to the direction of the wind, the direction of the current, the direction of the fish flock, and the direction of the sun coming before setting/lowering the fishing gear. Furthermore, if you pay attention to the results of the interviews, the handlers really understand and are able to analyze the procedures for reducing fishing gear, this is evident from the handler's statement that: "The position of the flock of fish and the net must be in the upper hand, so that the ship is under the wind, thus the ship will stay away from the net and the probability of the net getting stuck on the propeller leaf is very little. As for the reverse current, nets and flocks of fish are under current while ships are under current. Furthermore, the movement of the net fish flock must be blocked in front of it, while the ship is under the flock of fish. If the Fishing Operation is carried out during the day, it must pay attention to the direction where the sunlight comes, that is, the nets and flocks of fish must be positioned in the direction where the sunlight comes".

3. Raising the net (*Hauling*)

The stages of hauling carried out by the handlers through the results of the interview are as follows:

- The wrinkle rope and wing tip rope are separated
- The wrinkle rope is pulled with an axle until the net is shriveled and the entire ring rises to the top of the deck
- The body of the net was pulled from both ends until only the bag

was left with the fish in the bag on the boat

- After the fish are all up, the net is reordered and ready to be operated again



Figure 7. Withdrawal of *Purse seine* Fishing Gear on board

Description of Fishing Ground *Purse seine* Fishing Gear

Fishing activities are activities carried out to obtain a number of catches, namely various types of fish to meet demand as a source of food by using various types of fishing gear. The existence of demand causes an economic cycle where there will be gains and losses, so that fishing activities will be carried out by increasing fish production to achieve the greatest profit by fishing business actors.

In this case, the skill of the handler / skipper is very influential on the catch that will be obtained, because the beauty of the capture fishery is a fairly high uncertainty, in fishing operations fishermen must be able to determine potential fishing locations. The main problem in fishing activities is determining potential fishing locations, because the main target fish species of *purse seine* fishing gear are large/small pelagic fish groups that always migrate over long distances.

The results of observations in the field show that a large fleet of vessels in PP Lampulo operate *purse seine* fishing gear at WPP 571 and WPP 572. This is estimated to be related to the abundance of fish stocks and the presence of many sponges scattered in the region.

Description of Handler Proficiency in Determining Fishing Grounds for The Operation of *Purse Seine* Fishing Gear .

Fishing grounds are one of the important factors that can determine whether or not a fishing operation is successful or not. In conjunction with fishing gear, the fishing grounds must be good and profitable. In the sense that fish are abundant, flocked, safe areas, not far from ports and fishing gear is easy to operate

The determination of fishing grounds commonly carried out by fishermen so far still uses traditional methods, which have been obtained for generations. As a result, it is unable to cope with changes in oceanographic and weather conditions that are closely related to changes in dynamically changing fishing grounds. The expansion of large fishermen into small fishing grounds has resulted in unfair competition and even frequent conflicts between large fishermen and small fishermen.



Figure 8. Fish Catch Process

Prowess of Searching For Schools of Fish With Natural Signs

Various ways are carried out by handlers in terms of finding schools of fish or determining fishing grounds (DPI). The following are various ways of searching to find out where the fish are, including: Based on direct observations at the time of operation, Seeing groups of seabirds, Seeing changes in the color of seawater and water ripples, there are also some of them who use *fish finders* to find and find fish.

Based on the results of interviews with dilampulo handlers, there are several methods they use in finding or determining fishing grounds, including:

a. Based on vision

Foresight and acuity of sight are still commonly used by dilampulo handlers to find schools of fish this is evident on the basis of the handler's statement that a large part of the dilampulo boats place one or two crew members to monitor/ see the school of fish while the boat is advancing.

b. Based on the color of the sea water.

The change in the color of seawater is one of the benchmarks for *purse seine* handlers to carry out fishing operations, because in many of their experiences they state that the change in the color of seawater is one of the signs that the area has schools of fish, the greater the change in the color of the sea water, the greater the school of fish in the area.

c. Based on the information of fellow handlers

Communication or information of fellow handlers in the sea is also one of the indicators used by handlers in looking for fish gerombolang.

The Ability to Know Schools of Fish With Natural Signs

Handlers can find out many fish in the fishing grounds with several characteristics that are characteristic of natural signs, namely : **(1)** The number of foams or air bubbles on the surface of the water; **(2)** The color of the water will appear darker than the color of the surrounding water because many fish are flocking; **(3)** The presence of birds wandering on the surface of the sea; **(4)** The presence of wooden logs washed away on the surface of the sea.

Fish Hordes Gathering Skills

The number of types of fish with all their properties that live in waters with different environments, as well as the nature of pelagic fish that move around, both limited to an area and in the form of long distances such as tuna and skipjack tuna that cross the waters of several countries.

Any fishing venture at sea is basically how to get fishing grounds, schools of fish, and the state of their potential for later fishing operations to be carried out. Some of the ways that handlers do to collect fish at a point are to use fishing aids, namely rumpon and lamp rays.

In this case, the position of the rumpon and the light beam is to attract the attention of the fish so that the fish that were originally spread can gather at a point. According to a statement from some *purse seine* handlers at the Lampulo fishing port, rumpon is used by all *purse seine* vessels in Aceh generally at night, as well as lights are also used at night. The advantage of using sponges and lamps is that fish easily gather at a point / place, thus facilitating fishing operations with abundant results.

Handler Proficiency Reviewed In Terms of Catch

During the course of carrying out the study, the handlers of the *purse seine* vessel interviewed were 30 people. From the results of the interview, researchers got some information about the skills of handlers in PP lampulo in operating *purse seine* fishing gear. The skills possessed by the *purse seine* ship handler in PP Lampulo are reviewed in terms of catch results can be seen in this table 2 dibawah:

Table 2. The handler's proficiency is reviewed in terms of catch

No .	Ship Handler	Ship Speed At The Time Of		Length of Oper- ation Time	Catch / Trip
		Setting / Circular Net			
		The Sea in Undulating Conditions	The Sea in Shady Condi- tions		
1	Ship handler 1	6 – 8 knots	6 - 8 knots	150 Minutes	8000 Kg
2	Ship handler 2	5 – 6 knots	6 - 8 knots	150 Minutes	7000 Kg
3	Ship handler 3	4 – 6 knots	9 - 10 knots	150 Minutes	5000 Kg
4	Ship handler 4	5 – 5 knots	8 - 10 knots	150 Minutes	9000 Kg
5	Ship handler 5	3 – 5 knots	9 - 10 knots	150 Minutes	4000 Kg
6	Ship handler 6	4 – 5 knots	8 - 10 knots	150 Minutes	5500 Kg

No	Ship Handler	Ship Speed At The Time Of		Length of Oper- ation Time	Catch / Trip
		Setting / Circular Net			
		The Sea in Undulating Conditions	The Sea in Shady Condi- tions		
7	Ship handler 7	2 – 4 knots	9 -10 knots	150 Minutes	4500 Kg
8	Ship handler 8	3 – 5 knots	8 - 9 knots	150 Minutes	3000 Kg
9	Ship handler 9	2 – 4 knots	8-10 knots	150 Minutes	5600 Kg
10	Ship handler 10	3 – 4 knots	7 - 10 knots	150 Minutes	7000 Kg
11	Ship handler 11	5 – 6 knots	8 -10 knots	150 Minutes	5000 Kg
12	Ship handler 12	4 – 6 knots	9 - 10 knots	150 Minutes	5000 Kg
13	Ship handler 13	3 – 4 knots	8 - 9 knots	150 Minutes	6500 Kg
14	Ship handler 14	4 – 5 knots	8 - 9 knots	150 Minutes	7000 Kg
15	Ship handler 15	3 – 5 knots	7 - 10 knots	150 Minutes	8000 Kg
16	Ship handler 16	4 – 6 knots	8 - 10 knots	150 Minutes	8000 Kg
17	Ship handler 17	3 – 5 knots	7 - 9 knots	150 Minutes	4000 Kg
18	Ship handler 18	5 – 6 knots	8 -10 knots	150 Minutes	5000 Kg
19	Ship handler 19	3 – 5 knots	7 - 9 knots	150 Minutes	6000 Kg
20	Ship handler 20	5 – 7 knots	8 - 10 knots	150 Minutes	4000 Kg
21	Ship handler 21	3 – 4 knots	7 - 9 knots	150 Minutes	6000 Kg
22	Ship handler 22	2 – 3 knots	6 - 9knot	150 Minutes	5000 Kg
23	Ship handler 23	2 – 4 knots	7 - 9 knots	150 Minutes	5000 Kg
24	Ship handler 24	4 – 5 knots	8 -10 knots	150 Minutes	6000 Kg
25	Ship handler 25	3 – 4 knots	9 - 10 knots	150 Minutes	5000 Kg
26	Ship handler 26	3 – 4 knots	6 - 9 knots	150 Minutes	6000 Kg
27	Ship handler 27	4 – 5 knots	7 - 9 knots	150 Minutes	7000 Kg
28	Ship handler 28	3 – 5 knots	8 - 9 knots	150 Minutes	7000 Kg
29	Ship handler 29	3 – 5 knots	7 - 8 knots	150 Minutes	5000 Kg
30	Ship handler 30	3 – 5 knots	7 - 9 knots	150 Minutes	5000 Kg

Based on table 2 above, there are 30 *purse seine* vessels that were sampled in this study from all *purse seine* ships in PP lampulo, meaning that researchers have used 30 *purse seine* ship handlers to obtain information. From the table, it can be seen that the catch obtained by each handler in one operation trip is above 5000 Kg with various types of fish and various sizes. When viewed from the catch obtained by each *purse seine* ship handler in PP lampulo in one arrest trip, it can be said that the *purse seine* ship handler at PP Lampulo has a fairly good skill in operating *purse seine* fishing gear.

In terms of the operation of fishing gear, each handler has different experiences and methods, this can be seen at the time of positioning and the speed of the ship when the fishing gear is about to be lowered / looped. However, from the results of the interview with the handler, the speed of the ship when lowering the net has no signification effect in getting the catch, because every ship with *purse seine* fishing gear when you want to lower the gas pedal net at full / full position (full speed), but the speed of the ship will not be full due to external factors, such as current, wind and fishing gear itself.

This may be contrary to the theory which states that the speed of the ship at the time of setting greatly affects the catch obtained, the theory is also not refuted by the handlers of the *purse seine* ship in PP Lampulo, From the basis of this theory the handlers did not run out of sense in anticipating the weaknesses caused by these internal factors, namely engine strength, the thing that the handlers of the *purse seine* ship do to cover the time spent at the time of the net drop is to speed up the grinding/pulling of the color rope when the net has all been lowered, so that there is no gap for the fish to come out of the net cage.

Furthermore, the majority of *purse seine* handlers in PP Lampulo do not get special education about ship operation, the knowledge they have applied so far is only armed with experience alone and daily habits in the sea, their gestures and instincts are like they have been in love with the ship they are captaining. There is not a single

ship in PP Lampulo that has a manual on the operation of ships and fishing gear.

Of the 30 handlers sampled in this study, only four handlers had a certificate of Nautical Expert on Fishing Vessels III (ANKAPIN III) the rest did not have certificates, in terms of the catches obtained by our fishermen handlers specifically at PP Lampulo, this is quite encouraging because armed with their habits and and experience their skills are quite good compared to other regions. However, in terms of business competition in the future, the skill of the handlers possessed by our fishermen will not mean that every ship has used /used modern technology in carrying out fishing operations like in other areas.

On a traditional fishing scale, handlers in PP Lampulo have a fairly good proficiency in making arrests, will this proficiency be maintained by handlers in PP lampulo with the development of technology as it is today, according to the results of direct observations in the field and interviews in the field these results are difficult for handlers to maintain, because training and fisheries issues that continue to develop are currently difficult for them to access with their limited selves. Have.

Therefore, if assessed in terms of future business competition, to maintain the continuity of small fishermen, the government must quickly respond to this, little by little the human resources of small fishermen must continue to be improved with various trainings, socialization about fisheries issues that are increasingly developing and sophisticated.

Factors Affecting the Operation of *Purse seine* Fishing Gear According to Handlers

Problems that often occur experienced by handlers in the process of operating the *purse seine*, so that fishing operations do not go well include: (1) The moon is bright, when the moon phase is bright, the moonlight will be evenly distributed throughout the waters, so the use of lamp light is not effective for collecting fish and often thwarts *shooting* plans (collecting fish at one point) ; (2) The large number of predatory wild fish and dolphins, generally the light-attracted fish are dominated by small fish. Whereas larger fish are generally in deep layers

forming a community. This condition is taken advantage of by predators who are near the horde so that at any time they can attack and disperse the hordes of fish that have been concentrated; (3) Storms accompanied by heavy rain, large storms often affect the introduction of lamp light, light whose purpose is to concentrate fish can actually be *fish-catching (flickering lamp)* due to irregular reflection of seawater. This condition is also very disruptive to the operation of fishing gear because it is difficult to control; (4) Erratic change in the direction of the current.

CONCLUSION

Based on the results of research and observations in the field on the study of the skill of handlers in operating *purse seine* fishing gear in Pelabuhan Perikanan Pantai Lampulo City Banda Aceh, it can be concluded as follows: (1) The handler's skill in operating *purse seine* a minimum of 5 years of experience is required to be able to keep *purse seine* fishing gear secret; (2) The fishing grounds for *purse seine* fishing gear generally have a depth of 30 meters with a distance of 1 to 2 hours from the fishing base with the provision that the base of the equation is not muddy base; (3) Factors affecting fishing operations include wind, current, wave, seawater brightness, fish type, and length and in fishing gear

SUGGESTION

After this research has been carried out, the input suggestions that the research can provide are as follows: (1) Further research is needed on the proficiency of *purse seine* ship handlers in a traditional and modern way to determine the speed of *purse seine* ships in the future; (2) The human resources of small fishermen must be continuously improved with various trainings. So that the handler/nahkoda can find out the rules prohibited by the Fisheries Law

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